

# **CIFOR: Development of Multi-Jurisdictional Investigation Guidelines**

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## **The Council to Improve Foodborne Outbreak Response (CIFOR)**

- CIFOR is a multidisciplinary working group convened to increase collaboration across the country and across relevant areas of expertise in order to reduce the burden of foodborne illness in the United States.
- The Council of State and Territorial Epidemiologists (CSTE) and the National Association of County and City Health Officials (NACCHO) are co-chairing CIFOR with support from the Centers for Disease Control and Prevention (CDC).

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**EDITS: Median Intervals (days) and Range (by state) from Onset of Symptoms to Timeline Event**

Timeline Event	<i>Salmonella</i>	<i>E. coli</i> O157
Collection of stool sample	4 (2, 4)	3 (2, 6)
Case report from clinician to health department	9 (8, 11)	7 (6, 7)
Submission of isolate to public health laboratory	10 (8, 11)	8 (5, 9)
Case interview	14 (14, 22)	12 (9, 16)
PFGE subtyping	18 (15, 28)	15 (11, 22)

**Multi-jurisdiction guidelines:  
Purposes**

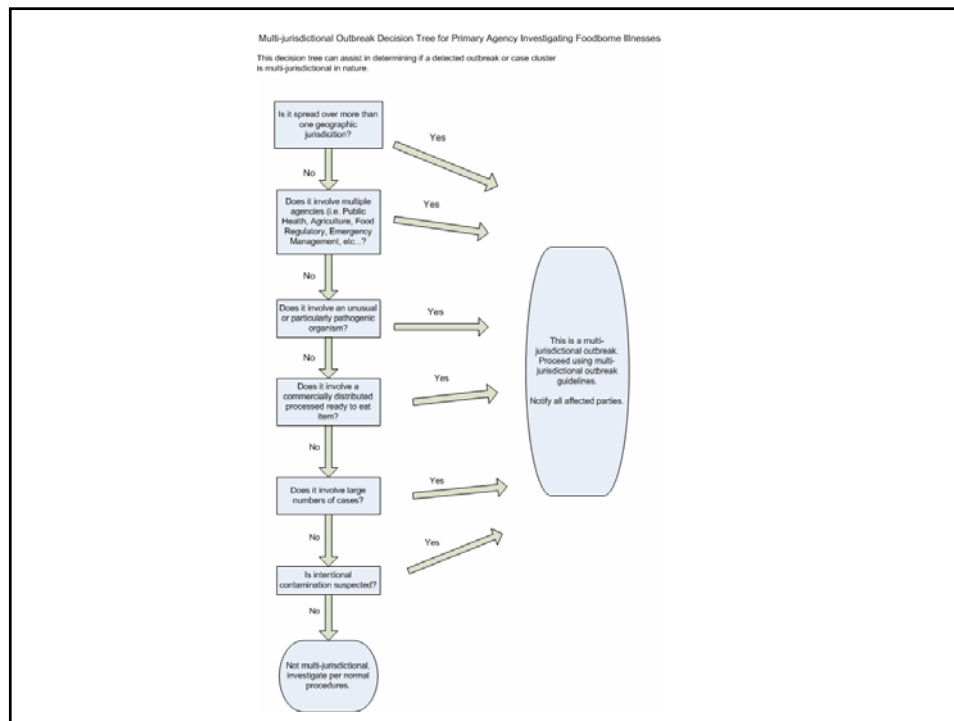
- Expand on previous work done outlining what should be done in multi-state outbreaks.
- Provide a framework to help local agencies, state agencies, and federal agencies, work more efficiently in outbreaks that cover more than one jurisdiction.
  - *Jurisdictions can be geographic in nature, but can also include involvement of different agencies in one locale.*
- Cover procedures that should be followed to identify, investigate, and conclude a multi-jurisdictional outbreak.
  - *They are divided by the level of the agency, from local health departments to the federal level.*

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## ***E. coli* O157:H7 & Salmonella Outbreaks United States, 2002-2005**

- *E. coli* O157:H7- 75 outbreaks (40% multi-jurisdictional)
  - Exposure
    - 11 multi-state, 17 multi-county
  - Residents
    - 1 multi-state, 1 multi-county
- *Salmonella*- 448 outbreaks (25% multi-jurisdictional)
  - Exposure
    - 24 multi-state, 65 multi-county
  - Residents
    - 10 multi-state, 14 multi-county



## **Multi-jurisdiction guidelines: Overview**

- Reviews relationships based on setting for outbreak detection, and level of significance of the event
- Summarizes key indicators/ notification steps
- Articulates principles for coordination of multi-jurisdictional investigations

## **Principles for Coordinating Multi-jurisdictional Investigations**

1. Outbreaks are most efficiently investigated as close to the source as possible.
2. The coordinating office must have sufficient resources, expertise, and legal authority to collect, organize, and disseminate data from the investigation
3. Outbreak investigations progress through phases of activity, and leadership of the investigation should reflect the focus of the investigation at the time.
  - Investigations of human illness outbreaks should be coordinated within public health agencies
  - Investigations of food contamination events should be coordinated within food regulatory agencies
4. Sharing of information between public health and food regulatory agencies is critical to the effectiveness of multi-jurisdictional agencies.

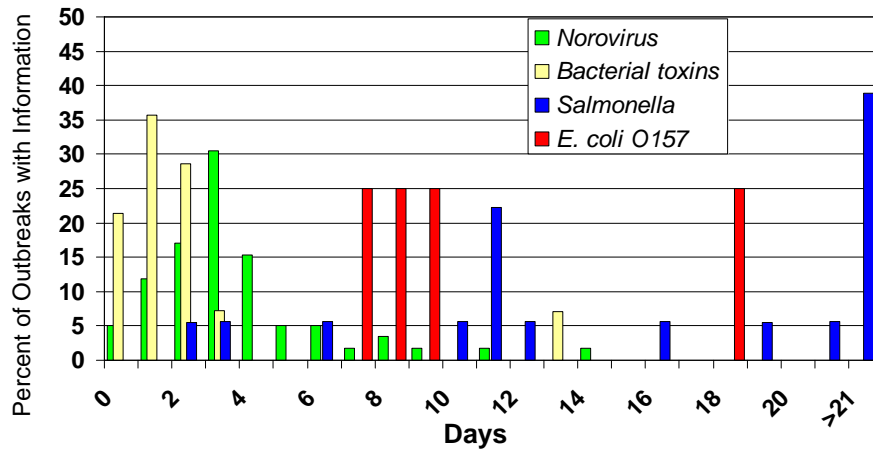
## **Principles for Coordinating Multi-jurisdictional Investigations**

5. Identifying the source of a multi-jurisdictional outbreak represents a collaborative process between local, state, and federal agencies and industry.
6. Releasing public information about the outbreak should be coordinated with the lead investigating agency, when feasible.
7. Most health departments have incident command systems (ICS) that guide outbreak responses within the public health agencies. However, most multi-jurisdictional foodborne outbreak investigations do not require activation of ICS.
8. An after-action review should be conducted by the agency coordinating the investigation.
9. All multi-jurisdictional outbreak investigations should be reported as such to EFORS.

## **Example: Outbreak Detection and Investigation at the Local Level**

- 7.4.1.1 Outbreaks detected at local level:
  - Group exposure with multiple illnesses identified by consumer complaint, health care provider, sporadic case investigation
  - Multiple consumer complaints received regarding same source
  - Sporadic case cluster investigation identifies common source
- 7.4.1.2 With initiation of investigation, ensure notification:
  - Affected and surrounding county, city health departments (Epidemiology, Environmental Health, Laboratory)
  - State health department (Epidemiology, Environmental Health, Laboratory)
- 7.4.1.3 Provide coordination between epidemiology, environmental health, and laboratory components of investigation
  - When findings indicate that multiple jurisdictions may be involved, additional communication and coordination are needed

## EDITS: Onset of Symptoms to Outbreak Complaint or Recognition



EDITS:2002

## Goals for Outbreak Investigations

- The overall goal of an outbreak investigation should be to rapidly obtain sufficient information to implement specific interventions to abate the outbreak, or to determine that no specific interventions are warranted.
- Secondary goals should include identifying and documenting the agent, vehicle, source of contamination, and factors contributing to the occurrence of the outbreak.

## Foodborne Outbreak Investigations

- ***Speed and accuracy** are the two most important qualities of all outbreak investigations. We cannot afford to sacrifice one for the other. Our outbreak investigation team motto should be “Fast and Right”.*

## Example: Outbreak Detection and Investigation at the Local Level

### 7.4.1.3. Continued...

**Incident:** Common source outbreak identified in one jurisdiction, investigation implicates processed food or fresh produce item...

**Action: Ensure notification** of appropriate food regulatory agencies, traceback source to point where contamination likely occurred, or determine if responsibility for investigation needs to be transferred to a state or federal agency

**Action: Ensure notification** of other jurisdictions that may be investigating similar, related events, of results of outbreak investigations regarding agent and vehicle

**Action: Subtype agent, upload patterns** to PulseNet

## Example: Outbreak Detection and Investigation at the Local Level

### 7.4.1.3. Continued...

**Incident:** Common source outbreak identified in one jurisdiction, linked to outbreaks identified in other local jurisdictions, by common agent, food, or water...

**Action: Ensure notification** of appropriate food regulatory agencies, and other jurisdictions as described above

**Action: Subtype** agents associated with outbreaks, **upload patterns** to PulseNet

**Action: Establish the coordinating office** (or an individual) for the investigations to **collect, organize and disseminate** collective data

## Example: Outbreak Detection and Investigation at the Local Level

### 7.4.1.3. Continued...

- These investigations **require information sharing and coordination** between multiple local agencies, under **local agency leadership** unless otherwise specified by state procedures, The state receives information and provides consultation.
- When the resources of one or more local jurisdictions cannot adequately respond, investigations **require active participation** from multiple local agencies, typically under **state agency leadership**.

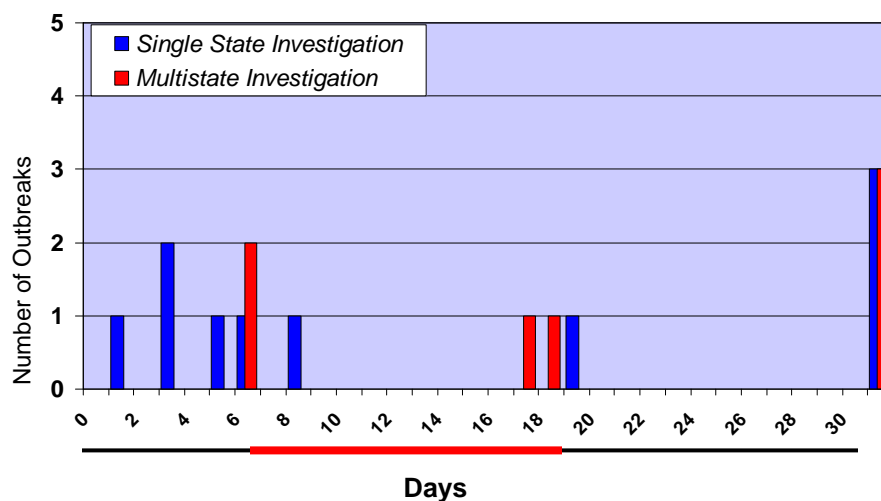


## Example: Outbreak Detection and Investigation at the Local Level

### 7.4.1.3. Continued...

- Multi-state outbreaks, and outbreaks associated with regionally or nationally distributed food products involve a transition to national significance.
- These outbreaks may require regional or national resources. While they **require active participation** from multiple local agencies, and state **response coordination, consultation and information sharing**, they may require **federal agency leadership**, depending on the capabilities and willingness of states involved.

### NCFPD: Outbreak Recognition to Intervention Multistate Outbreaks, 1998-2003



### **NCFPD: Outbreak Recognition to Intervention Multistate Outbreaks, 1998-2003**

- Strong state and local foodborne disease surveillance programs are necessary for effective national responses.
- Rapid and thorough investigation of outbreaks and clusters by individual state and local health departments should be encouraged, even if a multistate outbreak is suspected.
- Findings support Principles for Coordinating Multi-jurisdictional Investigations.